recommend the mouth-to-nose rather than mouth-to-mouth technique of resuscitation if the drowned casualty is still in the water. Under these circumstances it is easier to obtain a good airtight seal with the lips.

We are, however, particularly concerned about the advice that artificial respiration should be continued "for at least 15 minutes before ... checking the carotid pulse." Irreversible brain damage occurs rapidly after cardiac arrest and we would therefore recommend that the carotid pulse be sought at once if the casualty does not respond to clearing of the mouth, neck extension, and a few breaths of expired air resuscitation. If the pulse is absent, external cardiac compression must be instituted forthwith.

We would refer interested readers to the recent excellent definitive review of resuscitation.[1]

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[1] National Conference on Cardiopulmonary Resuscitation. *JAMA* 1980;**244**:453-509.

Nose bleeds

SIR,—Throughout his series "ABC of ENT" Mr Harold Ludman has achieved an excellent balance between brevity and comprehensiveness. However, in his article on nose bleeds (21 March, p 967) I feel that insufficient emphasis has been placed on the technique of squeezing the nose to control an epistaxis. In the absence of hospital facilities this is a most important, yet often neglected, first-aid measure.

The *whole* of the soft part of the nose should be squeezed between finger and thumb—much more than is shown in the illustration—in order to apply pressure to all of Little's area of the nasal septum. Pressure should be maintained for 10 minutes to allow the bleeding point to seal. Slow release of the pressure may sometimes dislodge the clot, whereupon the pressure should immediately be reapplied for a further 10 minutes, and so on until the bleeding is arrested. Patients, nursing staff, and medical students are almost unanimous in their desire to squeeze the bony bridge of the nose to control haemorrhage, a particularly unrewarding exercise. It is disturbing that many patients claim never to have received instruction before attending an ear, nose, and throat department.

The procedure is also helpful in determining the site of origin of the bleeding—if the patient continues to bleed despite properly applied pressure then the site is not in Little's area.

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SIR,—I enjoyed the article on nose bleeds by Mr Harold Ludman (21 March, p 967) but was surprised to see that he made no reference to the use of therapeutic arterial embolisation in cases of intractable bleeding. It is technically a simple matter to catheterise the external carotid artery using a Seldinger approach from the groin under local anaesthesia. The individual vessel or vessels responsible for nasal bleeding can be identified by arteriography during active haemorrhage[1 2] and are usually branches of the maxillary artery.[3 4] Selective maxillary artery embolisation with sterile absorbable gelatin sponge or other suitable embolic material[5] gives safe and effective control of the bleeding.[3 6]

Embolisation is superior to surgical ligation of the carotid or maxillary artery as a method of bleeding control for several reasons. Firstly, it obviates surgical dissection in the neck and does not require general anaesthesia. Secondly, visual proof of the success of the procedure can be established immediately by postembolisation arteriography. Thirdly, the emboli are carried into peripheral vessels at or close to the site of bleeding, making continued bleeding via collateral or anastomotic feeding vessels less likely to occur than if the main vessel has been simply ligated surgically. Fourthly, the procedure does not leave a scar (or scars) in the neck. And, finally, in the unlikely event of continued bleeding the procedure can easily be repeated.

The successful use of percutaneous transcatheter therapeutic embolisation for intractable epistaxis was first described in 1974,[3] and details of the techniques of superselective catheterisation and embolisation in the external carotid system are given in the superbly illustrated book on the subject by Djindjian and Merland.[4]

Although embolisation for persistent nose bleeds is a technique that needs to be employed relatively infrequently, it is probably a preferable alternative to surgery in most such cases. A final point for consideration is that while embolisation does not prevent the subsequent use of surgery, surgical ligation of the external carotid artery permanently precludes the use of therapeutic embolisation in that vascular territory.

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[1] Duggan CA, Brylski JR. *Radiology* 1970;**97**:605-6.
[2] Coel MN, Janon EA. *Am J Roentgenol* 1972;**116**:37-40.
[3] Sokoloff J, Wickbom I, McDonald D, Brahme F, Goergen TG, Goldberger LE. *Radiology* 1974;**111**:285-7.
[4] Djindjian R, Merland JJ, ed. *Super-selective arteriography of the external carotid atery*. Berlin: Springer-Verlag, 1978.
[5] Allison DJ. *Br J Hosp Med* 1978;**20**:707-15.
[6] Foley WD, Glancy JJ, Tulloch AGS. *Australasian Radiology* 1976;**20**:386-90.

Treatment of anaphylactic shock

SIR,—We were concerned to read in the last paragraph of your leading article "Treatment of anaphylactic shock" (28 March, p 1011) the statement that "all doctors, community nurses, medical auxillaries such as chiropodists" should have available and be instructed in the intramuscular use of adrenaline without any discussion of the possible risks of such a policy. We feel that there is a significant risk of this potentially lethal drug being given to patients who do not require it.

There are many causes of acute collapse following drug administration and anaphylactic shock, severe enough to require adrenaline, is probably the rarest. Simple fainting is by far the commonest. Many doctors, let alone medical auxillaries, do not have sufficient experience of acute collapse to enable them to rapidly and effectively make the differential diagnosis of such collapse. We would have preferred (as anaesthetists concerned in the teaching of nurses, chiropodists, and medical and dental undergraduates) to see you advocate a policy of simple measures first (airway care, oxygen administration, and attention to posture) and then progressing to drug treatment with adrenaline reserved for the patient with severe bronchospasm who has not responded to antihistamines.

We feel that many will be tempted to use adrenaline as a first-line measure for any cause of collapse after reading your leading article, with potentially disastrous results.

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Difficulty in swallowing

SIR,—Mr Harold Ludman in his series "ABC of ENT" (7 March, p 799) ignores one of the commonest causes of dysphagia. Indeed, he seems to imply that the cause in a large number of people may not be organic at all. Does he mean that dysphagia is frequently of psychological origin?

I see many patients who complain of dysphagia at almost any level, but commonly in the neck. Some also complain of the sensation of a lump in the throat. These patients usually have not lost weight, have no pain referred to the ear on swallowing, have not undergone voice change, and do not usually suffer regurgitation of food into the mouth. They do, however, give a clear history of gastro-oesophageal reflux. This may be confirmed by radiology or endoscopy, but in a significant number monitoring of lower oesophageal pH is required to establish the diagnosis. Manometry reveals a widespread disturbance of motor activity in the body of the oesophagus and there may also be pharyngo-oesophageal incoordination. These motor disturbances are well described in many books on disorders of the oesophagus—for example, that by Henderson.[1]

Failure to recognise that dysphagia commonly occurs in the absence of "organic" obstruction, seen on barium examination or endoscopy, causes a great deal of psychological morbidity in the individual who is told that there is nothing much wrong with him. Contrary to Mr Ludman's suggestion, localisation of the level of dysphagia is usually extremely accurate when this sort of secondary motor dysfunction is taken into account.

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[1] Henderson RD. *Motor disorders of the esophagus*. Baltimore: Williams and Wilkins, 1976.

SIR,—I was intensely dismayed by reading the recent article entitled "Difficulty in swallowing" (7 March, p 799) in which there is not one mention of oesophageal manometry. The oesophagus is normally a beautifully co-ordinated organ with raised pressure zones at both ends which relax on swallowing, associated with peristaltic waves of well-defined amplitude.

A standard barium meal with liquid barium